BRIEF OF APPELLANTS IN REPLY.

There are certain propositions of law in this case which must be conceded:

1. The ship owner warrants the seaworthiness of his ship, and this warranty is not merely that he has exercised due diligence to make his vessel seaworthy, but that she is so in fact.

2. By the Harter Act the ship owner, *who has exercised due diligence to make his vessel seaworthy in all respects*, is exempted from liability for injury to cargo by reason of the faults of his servants in the navigation of the vessel or by reason of the inherent quality of the thing carried, but this exercise of due diligence is a condition precedent to his enjoyment of these exemptions.

3. Due diligence requires him to discover defects which are patent. That is only *due* diligence which discovers what is open to discovery. The main purpose of the Act is, as was said in the *Irrawaddy*, 171 U. S., p. 192, "To relieve the shipowner from liability for latent defects."

By the bill of lading in this case, the shipowner seeks to delete the warranty of seaworthiness, and substitute therefor an agreement that he shall be exempted from liability "from defect existing at or previous to the voyage."

Can the shipowner do this, and if so upon what terms?

Before the passage of the Harter Act, he could probably so contract if the "defect" was not the result of negligence; but since then an additional condition is imposed upon him, namely, as the act expressly declares: "if the owner * * * shall exercise due diligence to make the said vessel in all

respects seaworthy and properly manned, equipped and supplied."

His contract can be sustained only by his bringing himself within the terms of the act. Certainly if he seeks the act's protection he must show his compliance with its conditions.

The burden is upon **him,** not upon the shipper.

Was the loss in the present case from a latent defect or not? An examination of the testimony seems to show, beyond contravention, that the injury to the cargo was *not* the result of latent defect.

In the appellee's counter-statement it is said, upon page 5:

> "It was further shown that the leak in the joint of the bonnet of the condenser which began the trouble was due, in the opinion of witnesses, to the excessive working of the machine, * * * and that the subsequent breaking or bending of the rods and bolts was, in all probability, due to the increased pressure required to reduce the temperature after the first leakage and stoppage, **and to that extent directly resulted from the original trouble.**"

There seems to be no doubt from the testimony, that the proximate cause of the injury to the machinery was *the leak in the joint.* That was evidence of the initial unfitness of the machine, and the other troubles followed as necessary or incidental consequences.

As was held in the *G. R. Booth,* 171 U. S., p. 450, the first of two causes which contributes to produce an injury to the cargo of a vessel is the proximate cause, if it be the efficient cause which set other causes in operation and those following, were but incidental or necessary consequences.

With these propositions in mind, let us look at the evidence. Respondent's own testimony seems to show clearly that the leak in the joint could not possibly be ascribed to a latent defect.

The Evidence.

A. Gray Kilburn, respondent's first witness, says (p. 118), describing the joint, that "It is bolted on with a steel head with a rubber gasket between;" and that when the pressure is great, whether from the high temperature of the water or any other cause, "the joint" would naturally be the weakest part. * * * "It is always so. You see, that coil is one continuous coil; naturally the pipe is not as weak as the joint, no matter how fast you make it."

He then testifies distinctly, in response to the question of respondent's counsel, as to what was the cause of the accident, **"I should say that was due to the hot water,"** and he repeats this answer in response to the question, "What was the direct cause?"

Upon p. 124 he says that the care of the refrigerating machinery, similar to that upon the "Southwark," requires no extraordinary skill, but that the causes of increased pressure upon the joint were "principally a hot room and hot water. I have had so much experience, I know where the trouble was. **The trouble was with the water."**

John F. McKernan, the superintendent of the repair shops, who does not seem to have inspected this joint at all, but simply looked at the machine as an entirety, says, upon p. 137, that there was no leak in the "bonnet" half an hour before the ship sailed, because if there had been any he would have known it.

"*Q.* How?
A. By the smell."

In other words, he deduces from the fact, not that he examined or tested the joint in question, but that he observed no smell of ammonia in the room; that the joint was without defect. Doubtless *smelling* the joint would have instantly disclosed if it was leaking, but could not possibly have shown whether it was *liable* to leak. Due examination or test would alone have shown this.

James S. Doran, respondent's next witness, is most explicit regarding the nature of the accident. From his testimony upon p. 157, the machine seems to have been a second-hand one, which "was for some time in Liverpool," and which came out of the "Alaska" or the "Spain", or as Haverfield, the second officer, says, p. 168, "out of the old 'Chicago,' one of them, whichever it was." He says, p. 155:

> "*Q.* Taking the statement of what occurred and the fact that the temperature of the water in the condenser was very high, can you form any idea of what caused first the leak in the condenser bonnet, and secondly, the breaking and bending of these parts of the pump?
>
> *A.* Well, the existence of this abnormal condition of the water and air and all the surroundings, would account, perhaps, for the slight leakage in the condenser bonnet, and then afterwards the fast working of the machine to overcome this high temperature caused them to break."

Upon cross-examination, he says (p. 158):

> "*Q.* You spoke in your answer of the abnormal condition of the air and water; what is the abnormal condition of the air to which you refer?
>
> *A.* I think that was wrong; it was *not* abnormal for the time of the year; my mind was running on the average temperature for the year around, and compared with that it was abnormal."

Respondent, it was plainly seen, was endeavoring to prove some extraordinary state of natural conditions. which would amount to an *act of God,* but in such proof, it absolutely failed.

Herbert Dale Haverfield, the second officer of the "Southwark," is exceedingly clear (p. 162) in stating the cause of the accident. Upon direct examination, he says:

> "*Q.* Can you tell or form any idea of what caused the trouble with that pump, this shaft and connecting rod?

A. Running the engine at such a high speed, having to do that on account of the high temperature of the water."

Certainly, he gives no evidence of any latent defect or any evidence that even looks in that direction.

Upon p. 164, he says :

Q. What was the first trouble to this machine that was called to your attention ?

A. **The slight leak in the bonnet, the leaking of the ammonia.**

Q. When was that called to your attention ?

A. **That was going down the river."**

James A. Aldcraft, the "Southwark's" third engineer, says, p. 172 :

"The ammonia joint began to leak. The angle joint, and then that was tried to be remedied by driving wedges into it ; and shortly after, the machinery broke down, the compression pump."

And upon p. 173 :

"*Q.* Could you form any idea why the leak occurred and the pump broke down on this voyage ?

A. The only thing I can refer that to is on account of the excessive speed we put the machinery in to keep the temperature in the box.

Q. What was that due to—why did you have to have that excessive speed ?

A. **The sea water being warm."**

The report of **Gilbert Paul,** the chief engineeer, is found upon pp. 206–7, but contains no reference to any *latent defect* as the cause of the leak in the joint. His testimony of the trouble is equally wanting in any reference to such cause for the accident. He says upon p. 180 :

"There was a little leak in the bonnet of the condenser of the refrigerating machine of the cold chamber of the 'Southwark.'"

And upon cross-examination, he explains the temperature shown in the extract of the log, which he characterizes as being simply "a little high," and the consequent pressure put upon the machine to overcome them as p. 189 **"due to excessive heat of the water at the time."**

William Shinn, his assistant, says pp. 192–3:

> **"The first that happened was the joint on top of the ammonia condenser blowing.** What is known as the bonnet joint. This happened as we were going down the river."

Upon p. 195, speaking of this joint he says:

> "All that happened was that there was a leak in the joint of the bonnet and that we repaired ourselves. **It is quite a simple job. All that there is to do is to get the ammonia out, lift the bonnet and slip a new India rubber in and screw it down again."**

The joint simply started to leak, and the mere leakage of the joint required the ammonia to be pumped out for the purpose of making the repairs, and then when the machine was run at a higher pressure than usual to make up for lost time, the piston rod bolts seem to have broken and the crank shaft to have become bent. It is impossible to come to any other conclusion, that if the same pressure was applied to the joint in the shape of a **test** before sailing, the same leak would have resulted as was discovered when the pressure was applied, after the vessel's departure.

No claim is made by respondent that running the machine at a somewhat higher pressure than usual, was a fault or error in management. No such defence was set up in the answer or by way of argument here or in the courts below. In fact respondent's witnesses insist that the machine was properly managed after the voyage began.

Presumption of Unseaworthiness.

In the *Pacific Coast S. S. Company* v. *Bancroft-Whitney Company*, 94 Fed. Rep., p. 196, it is said by HAWLEY (District Judge), expressing the opinion of the Circuit Court of Appeals for the Ninth Circuit.

> "That, although it may be presumed that a vessel is seaworthy when she sails, if soon thereafter a leak is found, without the ship having encountered a peril sufficient to account for it, the presumption is that she was not seaworthy when she sailed. *Higgie* v. *American Lloyds*, 14 Fed. 143,147; *The Gulnare*, 42 Fed. 861; *Work* v. *Leathers*, 97 U. S., 379; *The Planter*, 2 Woods, 490, Fed. Cas. No. 11,207 a; *Cort* v. *Insurance Co.*, 2 Wash. C. C. 375, Fed. Cas. No. 3,257; *Walsh* v. *Insurance Co.*, 32 N. Y., 427, 436."

Where a vessel soon after leaving port becomes leaky without stress of weather or adequate cause of injury, the presumption is that she is unseaworthy before sailing.

Ceballos v. *Warren Adams*, 174 Fed. Rep., p. 413.
Certiorari denied, 163 U. S., p. 679.

Seaworthiness.

Mr. Justice GRAY says, in delivering the opinion in the *Silvia*, 171 U. S., 462:

> "The test of seaworthiness is whether the vessel is reasonably fit to carry the cargo which she has undertaken to transport. This is the commonly accepted definition of seaworthiness."

Lord BLACKBURN, in *Steele* v. *State Line S. S. Co.*, L. R. 3, Asp. Cases, 72, says:

> "It will be a question, *taking the whole circumstances together*, was this ship reasonably fit to encounter the perils. * * * That question will have to be determined *upon the whole circumstances and the whole evidence.*"

In the *Prussia*, 93 Fed. Rep., relied on by respondent, the Court says :

> " It is *conceded* that the cause of the injury to the meat was the failure of the starboard machine to work owing to the presence of a leather washer in the apparatus. This could not be detected uutil the apparatus was taken apart."

The question of the burden of proof was therefore not considered, or whether there was or was not a warranty of initial fitness for the voyage.

In the *Irrawaddy*, 171 U. S., page 192, Mr. Justice SHIRAS, says :

> " The main purposes of the (Harter) Act were to relieve the ship owner from liability for latent defects, not discoverable by the utmost care and diligence and, in event that he has exercised due diligence to make his vessel seaworthy, to exempt him and the ship from responsibility for damage or loss resulting from faults or errors in navigation or in the management of the vessel."

The same Justice further says :

> " Upon the whole, we think that in determining the effect of this statute in restricting the operation of general and well-settled principles, our proper course is to treat those principles as still existing, and to limit the relief from their operation afforded bythe statute to that called for by the language itself of the statute."

In the "Carib Prince", 170 U.S., Mr. Justice WHITE very clearly points out, that the Harter Act does not relieve the warranty of initial seaworthiness which the law imposes upon the shipowner and that that act merely permits the shipowner to contract against the obligation of seaworthiness and substitute therefor the duty of due diligence.

The "G. R. Booth", 171 U. S. 450.

A ship owner is chargeable with any negligence of his

agents appointed to inspect a steamer to exercise the due diligence required by the Harter Act.

The Switzerland Insurance Company *v.* Flamborough, 69 Fed. Rep., p. 470.

And if the cargo is damaged by defects which a proper inspection would have disclosed, there is a lack of due diligence and the vessel is liable.

In the *Kensington*, 183 U. S., p. 263, Mr. Justice WHITE, after stating that exemptions limiting carriers from responsibility for the negligence of themselves or their servants, are held by the laws of the United States unjust and unreasonable, says that the Harter Act permitted exemption from liability for negligence in certain particulars. yet it left the general rule of liability in all other cases unimpaired:

> "It is settled in the courts of the United States that exceptions limiting carriers from responsibility for the negligence of themselves or their servants are both unjust and unreasonable, and will be deemed as wanting in the element of voluntary assent; and, besides, that such conditions are in conflict with public policy. This doctrine was announced so long ago, and has been so frequently reiterated, that it is elementary. * * *
>
> "True it is that by the Act of February 13, 1893, 27 Stat., 445 known as the Harter Act, already adverted to, the general rule just above stated was modified so as to exempt vessels, when engaged in the classes of carriage coming within the terms of the statute, from liability for negligence in certain particulars. But whilst this statute changed the general rule in cases which the act embraced, it left such rule in all other cases unimpaired. Indeed, in view of the well-settled nature of the general rule at the time the statute was adopted, it must result that legislative approval was by clear implication given to the general rule as then existing in all cases where it was not changed.
>
> "Testing the exemptions found in the ticket by the rule of public policy, it is apparent that they were void, since they unequivocally sought to relieve the carrier

from the initial duty of furnishing a seaworthy vessel for all neglect in loading or stowing; and, indeed, for any and every fault of commission or omission on the part of the carrier or his servants."

In Knott *v.* Botany Mills, 179 U. S., p. 71, the law in this respect is restated, and upon page 73, it is said, in the opinion delivered by Mr. Justice GRAY:

> "This section does but relax the warranty of seaworthiness in the particulars specified in the section."

In Rowson v. Atlantic Transport Company, Law Reports, January, 1903, page 114, King's Bench Division, a shipment of fresh butter was concerned. It was to be carried in chambers connected with the refrigerating machinery but was delivered in a damaged condition. The effect of the Harter Act was considered and KENNEDY, J., said:

> "That Act gives protection only upon condition of the ship being seaworthy. Now, a vessel, which has to carry cargo which can only be safey carried if its refrigerating machinery is in proper order, is one which at the present day, according to a series of decisions both in this country and in America, cannot properly be regarded as seaworthy unless it has that machinery in proper order. The term seaworthiness is one which was originally, no doubt, used in days when refrigerating apparatus and other modern appliances for the safe carriage of cargo was unknown. In a sense it is obviously not a happy term to use except with regard to that condition of the vessel which enables the owner to avoid exposure of the cargo to the perils of the sea. But the more extended use of the term has come to be well recognized. In the American case of "The Thames", in the course of the judgment of the Court, it is said: 'A ship may be seaworthy as to one sort of cargo and unseaworthy as to another. When a customary and well known article of commerce is received on board ship and carried on a voyage, the master guarantees the seaworthiness of his ship for taking charge of that article. As to her cargo, seaworthiness is that quality of a ship which fits it for carrying safely the particular merchandise which it

takes on board. The ship is impliedly warranted to be seaworthy quoad that article, and if damage occurs in consequence of the unfitness of the ship for carrying that article, the ship is liable, and cannot exonerate itself by proving the *non sequitur* that it is capable of carrying safely and without damage some other article of a different character." The same view as to unseaworthiness was taken by the Court of Appeal in Owners of Cargo on ship *Maori King v.* Hughes, where it was held that on a shipment of a cargo of frozen meat for carriage from Australia to London, there was an implied warranty that the refrigerating machinery was at the time of shipment fit to carry the frozen meat to its destination. And Kay, L. J., there observed: "The real inquiry, as it seems to me, would be, not as to the un-'seaworthiness' of the ship properly so called, but whether the ship was, at the time when the goods were shipped provided with proper appliances to enable her to carry these goods in their hard frozen condition, and deliver them in that condition at the end of the voyage.' In view of these authorities, it is to my mind clear that the word 'seaworthy' in the section of the Harter Act which is embodied in the bills of lading before me, means fit to carry the particular cargo safely in respect of the dangers which but for propper fittings and equipment might damage it during the carriage."

In the *Maori King*, 8 Aspinwall's Reports, p. 67, Judge MATTHEW held that where the bill of lading acknowledges the receipt of the cargo in apparent good order and condition and required its delivery "in like good order and condition."

> "This stipulation places an obligation on the shipowner to provide a ship fit to carry the cargo to its destination."

And further:

> "Can we say that the contract was entered into by the shipowner as owner of the ship in one capacity, and in another capacity as owner of the store itself on board ship; that there was a storehouse on board which he undertook to keep at a proper temperature, and that he ought to take due and proper care?"

He then dismisses this contention.

The case was heard on appeal, and Lord ESHER says (p. 69):

> "Both parties must have contemplated that there should be refrigerating machinery on board at the time of shipment, and that it should be in such a condition as I have described; because machinery that will not work is useless."

He then dismissed the argument seeking to draw a distinction between the liability of the shipowner as a carrier, and as a warehouseman.

Kay, L. J., says:

> "If that machinery, at the time of shipment, before the commencement of the voyage, should not be in a condition to perform its work, there should be, in my opinion, a breach of the implied contract to provide a ship fit for the service which this bill of lading contemplates."

And **Smith, J. L.,** reaches the same conclusion.

> "Both parties knew that refrigerating machinery must of necessity be used or the meat would decompose and it would have to be thrown overboard. Was there any warranty that that part of the ship in which the meat was to be carried was fit, when the ship set sail for the purposes for which the contracting parties were dealing? I am of the opinion, that there was."

In the *Manitou*, 116 Fed. Rep., p. 61 (District Court, Southern District of New York), Judge ADAMS recognizes the doctrine now contended for with reference to the burden of proof, and says:

> "Where an account of circumstances leading to a loss is entirely within the control of one side of the controversy, there is more burden upon such party than where the matter has been open to the other side for an ascertainment of the facts."

In the *C. W. Elphicke*, 117 Fed. Rep., p. 279 (District Court, Western District of New York), Judge HAZEL holds that where cargo is injured after it is received on board a vessel and before its delivery, the burden of proof rests upon the caarier to show that the vessel was in all respects seaworthy at the commencement of the voyage before it can even invoke the provisions of the Harter Act.

THE APPELLEE'S ARGUMENT AS TO THE INFERENCE TO BE DRAWN FROM THE TEMPERATURES OF THE LOG BOOK.

Not only has the appellee failed to prove that the loss occurred through a latent defect, but there is affirmative proof of the unfit condition of the machinery and compartment at the commencement of the voyage.

It is true, as asserted in the appellee's brief (p. 42), that the appellants contend that the temperatures of the commercial room and of the brine, as recorded in the log book, show that the refrigerating apparatus and the commercial room were in unfit condition at the time the meat was received and at the commencement of the voyage, but it is not true as there argued that the appellants assume that the temperatures shown by the log book for July 4th, the day of sailing, are the temperatures for the previous day. But it is contended that the log book temperatures for July 4, in connection with other undisputed testimony, demonstrate the unfit condition of the refrigerating machinery at the time the meat was received and of the unfit condition of the commercial room for receiving it.

It is admitted that the log book figures for July 4th are the average of four observations taken about 2 A. M., 8 A. M., 2 P. M., and 8 P. M.

To draw the proper deductions from the log book figures it is necessary to briefly consider the occurrences before July 4, the date the ship sailed.

The steamship had carried no cargo in the commerical box duriug the west bound voyage, and it became necessary, therefore, to start the refrigerating machinery a considerable time in advance of the receipt of the meat, so as to properly chill the room and to store up in its walls a large amount of cold, so that there would be no considerable increase in the temperature of the air in the commercial room during the time it was open for the receipt of the meat.

The evidence varies as to the time the refrigerating machinery should be started for the purpose of cooling down the compartment, the time given being from 48 to 72 hours.

Paul, the chief engineer of the vessel, in his testimony, says that the machinery was in operation three days before the vessel *sailed* (pp. 181 and 187), while other witnesses say that was in operation from 24 to 48 hours.

During this time the temperatures of the brine and of the air in the commercial box were taken from time to time by Shinn, the refrigerating engineer (p. 204), but the log book contains no entry of them whatever, and no effort was made by the appellee to prove these figures by Shinn when his testimony was taken at Liverpool.

It is the practice upon other lines carrying meat to record the temperatures from the time the machinery is started (Cross, p. 89; Fleming, p. 58), but the only explanation given by the engineers of the "Southwark" for their failure to record these temperatures is that there was no room in the log book for them (Shinn, p. 202). It is a fair inference, however, the accidents happening just after the vessel sailed, and the fact that Haverfield admitted that the opening temperatures were not as low as usual, had something to do with the omission of these temperatures from the log book.

The commercial box was opened for the receipt of the meat on the evening of July 3, at about 7 or 8 o'clock, and the temperature of the brine at that time, if the machinery had been working for the proper time and was in efficient working condition, would not be more than 20 degrees. This is the

highest figure given by any of the witnesses. Fleming says that in midsummer the temperature of the brine ought to be reduced to 12 degrees before the opening of the box (p. 54), and Roelker mentions 15 degrees as a safe brine temperature.

The temperature of the air in the commercial box ought to have been reduced at the same time to not more than 25 degrees (the highest figure given), although the witnesses say that as a precaution, in midsummer, it should be reduced to about 20 degrees.

All of the meat was stored by about midnight, and the commercial box was then closed, after having been open for four or five hours.

The first temperature of which there is any record is that made at 2 A. M., about an hour or two after the box was closed and the machinery started.

The second observation was taken about 8 A. M., and the machinery had then been in operation seven or eight hours, instead of six, as stated in the table in red ink inserted in appellee's brief opposite page 52.

The third observation was made at about 2 P. M. It is stated in the table in the appellee's brief that this observation was made during a stoppage of the machinery, but there is no testimony to support that statement and on the contrary the testimony shows that the machinery had not been stopped at that time. The vessel left her dock at about 11 o'clock A. M., and the leak in the bonnet was first discovered an hour or two later, but there was no evidence that the machinery was stopped at this time. This leak was repaired by driving in wedges, which worked for a time, although not very successfully. Some time later, when the vessel was in the vicinity of Reedy Island, these repairs became ineffective and the machinery was for the first time disconnected. Reedy Island is about 40 miles down the river from Philadelphia, and a vessel of the type of the "Southwark" could not have reached there until a late hour in the afternoon of July 4th, long after the record was taken.

The next temperature was taken at about 8 P. M., evidently a few hours only after the machinery was disconnected, but in the meantime the engine of the ship's provision box had been attached to the commercial box.

As before stated the temperatures shown in the log book for July 4th are the average of these four observations, and upon them the appellees have constructed a fanciful table contained in the recapitulation in red ink opposite page 52. It is stated by the appellee in support of the guesses there made as to the temperatures that they are shown under the evidence of the libellants and respondents' witnesses to have been both proper and probable. Both of which allegations are explicitly denied, because, as will be shown hereafter, the undisputed evidence in the case shows that all of them are not only improbable, but impossible, *if the temperatures were of the proper degree at the time the box was opened* for the receipt of the meat, and, further that if correct, they are grossly improper, and, conclusively demonstrate that the temperatures at the time the meat was received were improper and excessive.

This fanciful table is based upon the following propositions, all of which are unsupported by the testimony.

1. That the temperature of the air in the commercial box was 25 degrees at the time it was opened for the receipt of the meat.

2. That the temperature of the meat at the time it was delivered was 54 degrees instead of 36.

3. That the temperature of the brine was proper. No figures at the time the box was opened however, have been given.

4. That during the four or five hours that the commercial box was open that the temperature of the air in the room rose to about 45 or 48 degrees and *that the temperature of the brine in consequence rose to at least 40 degrees.*

1. *Temperature of the room at the time the meat was received.*

There was no dispute in the testimony but that the temperature of the air in the room should not exceed 25 degrees when opened to receive the meat, and that as a precaution it should be brought down to about 20 in mid-summer. Cross testified (p. 86,) that the proper opening temperature is about 22 degrees. Fleming says that in summer time it is well to keep the opening temperature not over 20 (p. 26). Roelker says that it should be brought down to 25 and (or) 20, and Rossi gives the figures as 25 or 26.

The appellees say in their brief (p. 44);

> "The record is explicit (R. 164) that the room before loading came down almost to the usual temperature, that is 25 degrees." (Record 34-40.)

There is not a single word of testimony on page 164 or elsewhere in the testimony of Haverfield or any other witness that the record came down almost to 25 degrees. Haverfield expressly admits, however, that the proper temperature was not reached at the time the box was opened, as shown by the following testimony (Record p. 164):

> "×*Q.* What was the purpose of starting the machine for forty eight hours before sailing.
>
> *A.* To get the room cooled down.
>
> ×*Q.* Was that successfully accomplished?
>
> *A. The room did not come down quite as low as it usually did,* from the intense heat at that time of the year."

Paul, the chief engineer, tacitly admits that the proper temperatures were not acquired (p. 188).

2. *The Temperature of the Meat.*

Much stress is made by the appellee on the temperature of the meat when received.

The importance of this is not at all clear because, if the

meat was of an improper temperature and could not be safely carried it was the duty of the ship to refuse to receive it. It was however, received, and a bill of lading was issued therefor reciting that it was received in "*apparent good order and condition.*"

The appellee argues that the meat should have been of a temperature from 32 to 36 degrees (p. 45). This is but one instance, of many, where much liberty is taken with the figures in the evidence.

Cross says that the temperature of the meat ought to be from 34 to 40, while Kilburn, the appellee's witness, says it is usually about 42 degrees (p. 121).

The testimony shows, however, that the temperature of the meat is an exceedingly unimportant element, because the meat, having been previously chilled, the surface only was affected by being exposed to the air, a condition which imposed little or no burden upon the machinery, and could soon have been removed if the machinery had been in efficient condition.

There is no proper testimony, however, in this case as to the temperature of the meat. It is true that the record contains a statement of Paul, the chief engineer, (Record p. 185) that the heat of the meat when put in was 54 degrees and that Shinn, the refrigerating engineer, says that the heat of the meat when put in would be 54 degrees.

The testimony of both of these witnesses was taken a long time after the accident occurred, under a commission to Liverpool, and it will be noticed that the statements of these witnesses as to the temperature of the meat is not responsive to the interrogatories addressed to them and for that reason was inadmissible.

The appellants made a motion in the District Court to strike out this testimony for this reason, but no disposition was made of the motion as apparently the Court deemed it necessary, in view of the reasons given, for dismissing the libel.

3. *The brine temperature at the time the compartment was opened for the receipt of the meat.*

The temperature of the brine was taken from time to time before the meat was received, yet the appellee offered no proof in relation thereto, nor has any conjecture been made in the appellee's brief as to the temperature of the brine at the time the box was opened for the receipt of the meat.

The nearest approach to an attempt to fix the brine temperature at that time is to be found in the recapitulation opposite page 42, where it is said it is probable that the brine temperature at the time the first observation was taken, that is on July 4, at about 2 A. M., was 40 degrees.

The testimony is clear and positive and undisputed that the temperature of the brine at the time the box was opened should be not more than 20 degrees, and some of the witnesses say that in the summer time, as a precaution, it should be as low as 12 degrees.

Assuming, therefore, as contended by the appellees, that the brine temperature on July 4 was 40 degrees, one of two conclusions must be drawn—first, that the temperature of the brine had increased from 20 degrees at about 7 or 8 o'clock on the evening of July 3d to 2 A. M. on July 4th, a difference of 20 degrees; or, second, that the brine temperature was above 20 degrees, and therefore improperly high at the time the box was opened in the evening of July 3d.

The appellee's drew the first conclusion, that is, that the temperature of the brine was proper at the time the box was opened, and that it rose more than 20 degrees during the four or five hours that the box was open. It is asserted by the appellee's brief (p. 45) that the immediate effect of opening a properly chilled box during the loading of the meat and the placing in it of a great quantity of dressed meat of a temperature from 32 degrees to 36 degrees, is a great rise in the temperature of the room *and in consequence of the brine circulating about it.*

It is further said (p. 46), referring to the increase in the temperature of the air during the time the box was open, that the temperature of the brine would he correspondingly high.

Is there any testimony to support this conclusion?

None has been cited in the appellee's brief, because there is not only no such testimony in the record, but the uncontradicted testimony is directly to the contrary.

It is true that during the time the box was open for the receipt of the meat there was an increase in the temperature of the air in the room. This was but natural. The witnesses give different figures as to the probable increase, and it may be that the temperature of the air in that time rose to 40 degrees. This, however, was not true of the brine, as there is little or no increase in its temperature during the time the meat is being received.

At the utmost there is an increase in the temperature of the brine during the time the box is open of *one or two degrees only*, and if the temperature of the brine was 40 degrees at 2 A. M., on July 4th, as set forth in appellee's recapitulation, *it must have been at least 38 degrees at the time the box was opened.*

The character of the brine and its quality of retaining cold for a considerable length of time, is well known and is the reason of its adoptation as a refrigerating agent.

Roelker testifies (p. 33):

"*Q.* I am speaking of 15 degrees as a proper temperature for the brine before the meat was put in?

A. Before the meat is put in, and not a long time after the meat is put in; because the temperature of the brine does not change so very quickly if the walls and ceilings and floors of the room have been properly cooled before putting the meat in.

Q. The meat, as you have said, brings up the temperature a certain amount beyond its own heat?

A. It brings up the temperature of the air in the room."

Fleming testifies (p. 71):

"*Q.* You have said that the temperature of the brine going into the commercial box is about 12 to 18 degrees; what is the effect on the temperature of the brine of the introduction of the cargo; does it rise in the same proportion that the temperature of the air in the room rises or not. In other words, when the temperature of the air goes up to 40 degrees, does the temperature of the brine also go up to 40?

A. No.

Q. How far up does it go?

A. Taking the temperature of the brine at what figure?

Q. What I want to know is this: You say that the temperature of the brine should be from 12 to 18 degrees. Where you open the air box with the brine at that temperature and introduce the meat into the chamber and close it up, what change would there be in the temperature of the brine during the time the box has been open?

A. The brine should remain at the same temperature.

Q. The brine does not change at all?

A. No.

Q. It is the air only which changes?

A. Yes.

RE-CROSS-EXAMINATION.

By MR. PAUL:

Q. Don't the brine get heated about two degrees, some slight difference?

A. There is a slight difference."

Cross testified, (p. 89):

"*Q.* What is the character of the brine for retaining cold?

A. It can retain cold for a long time, if it is once cold. If it is once to a low temperature, it will retain that for a long time; of course, you cannot freeze it.

Q. Does the temperature of the brine at 40 degrees indicate whether or not the brine during the preceding 24 or 48 hours in which it is said that machine had been at work, had been at the proper temperature or not?

A. I should say it never had been cooled.

The testimony of these witnesses also shows that the compartment of the "Southwark" was opened an unusually short time, that is, four or five hours, while ten or twelve hours is about the usual time. Cross testifies (Record p. 86):

"*Q.* How long are boxes usually opened for the purpose of receiving cargo?

A. It depends on how much they put in, but, as a usual thing, ten or twelve hours, twelve hours I should judge.

Q. And they are then closed up again?

A. They are then closed up again. The doors are sealed up then.

Q. What is the usual temperature in the room at the time the doors are sealed in the summer time?

A. 34, 36; 36 degress in hot weather, after the box had been open all night.

Q. During the time the meat is being received, is the refrigerating machinery at work or not?

A. We shut down when the doors are open, because you could not cool the temperature down. Sometimes, we would keep turning there very slowly; nearly always shut down."

This testimony conclusively shows that if the temperature of the brine at the time the box was opened had been at the proper degree, and the witnesses agree that 20 is the highest safe degree, then the temperature of the brine at the time the box was closed, ought not to have exceeded 22 degrees.

The box was closed at midnight and the machinery re-started, and consequently, there must have been some reduction in the two hours before the observation was taken about 2 A. M. It is fair to assume, therefore, that the temperature at that time ought to have been not more than 20 or 21 degrees, whereas, the appellee, in order to produce the average contained in the recapitulation is compelled to admit a temperature of 40 degrees at that time.

The reduction of two degrees, which we have mentioned, does not seem to be out of the way, when it is considered that in the appellee's recapitulation, it is stated that the

temperature of the brine at 8 A. M. had been reduced about 7 degrees in six hours.

In order to produce the results by this averaging in the recapitulation, the appellee is obliged to contend that between *8 A. M. and 2 P. M. the temperature of the brine increased* to 41 degrees, and in explanation of this, it is stated that this observation was taken during the stoppage of the machinery.

We have already shown, however, that the observations at 2 P. M. must have been taken before the machinery was stopped at all, because the vessel sailed at about 11 A. M., and the first trouble occurred about 1 P. M.; that the machinery was not stopped at the time but that the defect was remedied by driving in wedges, and that it was only at a later time during the afternoon that the machinery was stopped.

Consequently we have three observations undoubtedly taken before the machinery was stopped and those observations should not have shown any increase, but if any change, there should have been a decrease from the time the box was closed.

If the first observation showed from 20 to 22 degrees as it should have done, then the second and third observations would not have exceeded that figure, and to bring up the average for the day to 40 degrees it would be necessary to have a brine temperature of 94 degrees at 8 P. M., a conclusion which is absolutely impossible, considering the character of the brine for retaining cold.

But the appellee contends that the appellants have misunderstood the figures taken from the ship's log as to the temperature of the "incoming brine," and it is asserted that expression in the log-book refers to the temperature of the brine that had gone the rounds of the meat box and was coming back into the expansion coils, instead of being the temperature of the brine going into the compartment.

In support of that statement the appellee relies, strange as it may seem, not upon the testimony of any of their own witnesses, but upon a mere expression of opinion by Cross

who does not pretend to say accurately to which it refers, but simply says that he should "take it" to be the temperature after it has traveled through the box. (P. 87.)

This witness says upon the vessels on which he has served that it is the practice to record the temperature of the brine when going into the compartment and also when returning.

Rossi, on the other hand (p. 38), seems to think that it referred to the brine flowing into the compartment.

The question, however, is not a particularly important one, because the testimony clearly shows that there is but little difference between the temperature of the brine flowing into the room and out of it.

Cross says (p. 87):

> *Q.* Is it the custom upon the "Mesaba" and the other vessels in which you have been engaged to keep the temperature of the brine both as it goes in and comes out of the box?
>
> *A.* There is *generally two, three or four degrees difference.*
>
> *Q.* Is it customary to keep a record of the temperature of the brine both going in and returning?
>
> *A.* Why, certainly.
>
> *Q.* You say there is usually a difference of three or four degrees?
>
> *A. Why, from two to four degrees is the usual thing; possibly five sometimes.*

Admitting, for the purposes of the argument, that the log records refer to the temperature of the brine returning from the box, and making the greatest allowance of difference between the temperature of the brine flowing into and out of the box, the temperature of the brine flowing into the box, according to the log records, would have been at least 35 degrees—15 degrees more than it should have been—and at a temperature utterly impossible to properly reduce the temperature of the air in the room below freezing point.

Assuming that 40°—the log book record—is the temperature of the brine returning from the compartment and making the greatest possible allowance of difference (5°) then the average of temperature of brine flowing in must have been at least 35°.

Assuming that the log figures refer to the brine returning from the meat compartment, and accepting the highest figures given by any of the witnesses, the nearest estimate of the observations necessary to produce an average would be as follows:

Proper temperature of time box was opened	20 degrees.
2 A. M. (allowing for 2 degrees increase during time box was opened, but making no allowance for reduction during two hours machinery at work)	22
8 A. M. (making no allowance for reduction through working of machinery. Appellee claims that there was a reduction of 7 degrees)	22
2 P. M. (still making no deduction for working of machinery)	22
8 P. M. increased after stoppage of machinery to	74
	4) 140
	35

Conceding the third observation was taken after the machinery stopped, and that the temperature at 2 P. M. was 41°, and further giving the defendants the benefit of no reduction from midnight to 8 A. M., we have the following:

2 A. M.	22
8 A. M.	22
2 P. M.	41
8 P. M.	55
	4) 140
	35

What are the proper deductions to be drawn from these figures and facts? Do they sustain the contention of the appellee that the temperature of the brine and of the air in the compartment were proper at the time the compartment was opened and the meat received?

If the temperature of the *air* was proper at the time the compartment was opened, then it unquestionably would have increased during the four or five hours that the box was open, and as the decrease in its temperature after midnight, when the box was closed, would depend very largely upon the temperature of the brine; the record of the temperature of the air itself does not afford an infallable test to determine whether the machinery, which had been working admittedly for a space of time sufficient to have procured the proper degree of temperature, had been efficiently working and had reduced the temperature to the proper degree.

Two positive facts only as to the temperature of the air are known; the first is, as testifield by Haverfield, the second engineer, that the temperature of the air in the box at the time it was opened *was not as low as usual* (p. 164), and that the temperature in the compartment at the time the vessel *sailed* was 42 degrees. (See statement of Paul, p. 207.)

This latter circumstance throws considerable light upon the inefficient working of the machinery. The appellee, by the most liberal use of figures, admits that the temperature of the air in the compartment at the time it was closed at midnight could not have exceeded 45 to 48 degrees. Even if the temperature of the room was from 45 to 48 at that time, as was 42 at 11 A. M., when the vessel sailed, then the machinery had only reduced the temperature of the air from 3 to 6 degrees in about eleven hours.

The testimony shows that during this time the temperature would have been reduced, if the machinery had been in efficient condition, to almost the proper degree.

Fleming testifies (p. 58) that with proper conditions the temperature of the air in the compartment can be reduced to

the freezing point in about twelve hours after the closing of the compartment.

There is evidently but little difference of opinion upon this point, because in the elaborate recapitulation made by the appellee, it is asserted that in the six hours between 2 A. M. and 8 A. M. the temperature of the commercial box was reduced 5 degrees.

As has been shown heretofore, the temperature of the brine does not fluctuate, and its record offers *an infallible test of the brine temperature, and consequently of the temperature of the air at the time the meat was received.* It has already been shown that if the brine temperature at 2 A. M. was 40 degrees, as contended by the appellee, then it must have been grossly improper at the time the box was opened a few hours before, and must have been normal at that time —that is, about 38 degrees instead of about 15 or 20.

But, furthermore, the character of the brine for retaining cold makes it possible to assert positively that the average of 40 degrees of brine temperature, as shown by the log for July 4, indicates that the brine temperature at the time the box was opened was excessively high. It is immaterial to discuss why it was too high; but as the testimony shows that the machinery had been working for a time sufficient to have reduced the brine temperature to the proper degree, the only deduction possible is that the machinery was out of order in some respect.

We submit, therefore, that instead of drawing the conclusion that the brine temperature on the evening of July 3d was at a proper degree—that is, not more that 20, that the only possible deduction from the testimony is that it was much in excess of that degree, and we submit upon this point the testimony of experienced men, fully competent to draw deductions from the record of the temperature.

Roelker says that if the brine temperature at the time of *sailing* was 40 degrees, that it was a very improper temperature, and that the temperature should have been down to

about 15 degrees ; that if the machinery had been working for 24 to 48 hours it had produced very little cold, and "*that it had worked out a great deal less than half of its proper capacity*" (p. 27).

Rossi says (p. 39) that if the brine temperature was at 40 degrees at the time the vessel *sailed*, that "it shows that the machine was not working in proper order to take care of the meat room," and that this might be due to the fact that the room was not cooled at all before the contents were put in, or that, if it had been cooled properly, that the machine was not working at all in proper shape.

Fleming says that if the brine water was 40 degrees at the time the vessel sailed, that it showed "*that the machine was not doing its work.*" (Rec., p. 54.)

Cross testifies (p. 89), that if the temperature of the brine was 40 degrees, and that the machinery had been at work from 24 to 48 hours that it would show that the brine "*had never been cooled.*" He further says, (p. 90): "*I do not think the refrigerator was working right; I am surprised they put the meat in at that opening temperature.*"

Young says (p. 95), that the temperature of brine at 40 degrees, together with the other figures in the Record, indicate that the machine *was not working properly.*

If these figures and facts be borne in mind, it is impossible to arrive at any other conclusion than that arrived at by these experienced witnesses—that is, that the brine was never reduced to the proper degree of temperature, and consequently that the air in the compartment was never properly reduced, and that these results were due to some inefficiency in the working of the machinery.

As before stated, the burden of proof is upon the appellee to establish affirmatively that the loss occurred through a latent defect. There is no evidence of a cause from such a defect, and the appellant's case could be safely rested upon

the failure of the appellee to show a loss from that cause; but we submit that in addition this evidence establishes affirmatively that the loss was not due to any latent defect, but to the unfitness of the refrigerating machinery and the compartment at the time the meat was received.

3. The inference of the unfitness of the refrigerating machinery from the failure to reduce the temperature properly after the break down and repairs.

It is asserted in the appellee's brief (Record, p. 55) that the appellants base this argument entirely upon certain statements of the *second* and *third* engineers to the effect that the machinery worked properly after the accident and repairs at sea, and the appellee gravely argues, that no effect ought to be given to this testimony, because it was not the business of the *second* and *third* engineers to observe or examine the temperature.

The inconsistency of the appellees as to the value to be placed upon the testimony of these witnesses is delightful, because the appellee asks the Court to accept the statement of one of these witnesses, that the temperature in the compartment at the time the vessel sailed was 38 to 40 degrees, in preference to the statement of the chief engineer, who had charge of the matter, that the temperature was then 42 degrees.

But it is not correct, as there argued, that the appellants rely exclusively upon the testimony of these two witnesses. The testimony of the *chief engineer* of the vessel, who unquestionably had charge of the matter, is entirely overlooked. He testified (p. 181):

"*After the repairs, it worked all right; it gave no more trouble.*"

H. L. CHEYNEY,
JOHN F. LEWIS,
for Libellants-Petitioner.